

CALIFORNIA STATE BOARD OF HEALTH

MONTHLY BULLETIN

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THE CALIFORNIA STATE BOARD OF HEALTH

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REGULAR MEETINGS

The meetings of the California State Board of Health are held regularly the first Saturday of each month, but the quarterly meetings required by law to be held at the Capitol of the State are ordinarily designated as January, April, July, and October.

By courtesy of the University of California the Food and Drug Laboratory and the Hygienic Laboratory are located in University buildings at Berkeley, California.

Address all general communications to the

SECRETARY, Sacramento, California.

JUNE BULLETIN.

REPORT OF BUREAU OF ADMINISTRATION FOR MAY, 1912.

JOHN F. LEINEN, Director.

Executive Division.

One of the principal duties which devolves upon the Executive Division is that of the dissemination of expert knowledge in all cases pertaining to sanitation. Such knowledge is greatly needed in many localities of the State, especially by the smaller villages and communities which, either through lack of knowledge and experience in sanitation or through lack of funds, do not know what course to pursue when they have to face problems affecting the general health. Advice of this general nature has been freely given in all cases where it has been asked for and in many other cases where it was evident that a community was considering a course that was apparently inconsistent with its future interest.

It has been of considerable assistance to local health authorities in aiding them to draft rules and regulations, and as the work of the local authorities is gradually placed on a higher plane, the State Board of Health can be of even greater assistance in obtaining uniformity in health work throughout the State.

Efforts have been made to bring about uniformity in recording statistics relating to health work of all kinds.

Investigations have been made, through local health officers, of public nuisances due to insanitary slaughterhouses, septic tanks, cesspools, dairies, expectoration in public places, improper sewage disposal, polluted water supplies, garbage disposal, meat markets, bakeries, lumber camps, mosquito breeding places, manure heaps, inadequate drainage, etc.

Fly swatting campaigns have been successful throughout the State. Mosquito slamming crusades will come next.

Division of Sewage Disposal and Water Supplies.

Owing to increased interest and activity in matters relating to water supplies and sewage disposal throughout the State, there has been a marked increase in the work. Examination of plans for sewerage and sewage disposal and issuing of permits for the discharge of sewage into the streams of the State constituted a considerable portion of the work of the division during the month.

In work of this nature, plans for the following municipalities have been either completed or are in preparation:

Rio Vista	Placerville	Oakdale
Red Bluff	Sacramento	Dunsmuir
Colfax	Auburn	Los Gatos
Fortuna	Jackson	Orland
Winters	Grass Valley	Chico
Weaverville	Sisson	Nevada City
Lodi	Portola	Sebastopol
Saratoga	Ukiah	Sonora

Division of Morbidity Returns.

Special attention is given to communicable and contagious diseases occurring in the State.

The blanks, used for reporting cases, have been much improved and there is a gratifying increase of care on the part of local health officers in properly filling them out. Also, reports have been sent in much more promptly, and the number of reports received has corresponded more accurately to the number of cases in existence, than formerly, for instance: The March blanks were returned from 179 cities and towns; in April they were returned from 242; while in May, returns were received from 292 cities and towns.

Typhoid fever. Los Angeles and San Francisco tied for first place with 14 cases. Oakland was next with 7 cases. Tehachapi was next with 3 cases. Bakersfield, Fullerton, Long Beach and Sacramento, each had 2 cases, while Berkeley, Mountain View, Napa, Orange, Riverside, Salinas, Brawley, San Diego and San Leandro are credited with 1 case each.

Rural. Imperial County, 14 cases; Sacramento County, 2; Contra Costa County and Santa Clara County, 1 each. Total, 73.

Smallpox. Sacramento reported 12 cases, Los Angeles, 8, San Francisco 4, Visalia 3, Oakland, Auburn and San Bernardino 2 each, Pasadena, Tulare, San Diego, Kennett and Alturas reported 1 each.

Rural. Butte County, 11 cases; Los Angeles County, 5; Sacramento County, 4; Tulare County, 2; Shasta, Modoc and Ventura counties, each 1. Total, 63.

Diphtheria. Los Angeles, 51 cases; San Francisco, 15; Oakland, 12; Berkeley, 11; Pomona, 8; Pasadena, 5. Total, 102.

Scarlet fever. San Bernardino, 20 cases; San Francisco, 16; Oakland, 9; Fresno and Los Angeles, 8 each; San Jose and Riverside, 3 each; San Luis Obispo, Sacramento and Monrovia, 2 each.

Rural. Los Angeles County, 9; San Bernardino County, 8; Kern County, 6; Santa Clara County, 4. Total, 110.

Morbidity Report for May, 1912.

	Cases.	Places.
Smallpox -----	63	20
Scarlet fever -----	120	28
Diphtheria -----	119	22
Mumps -----	68	10
Measles -----	625	32
German measles -----	3	2
Pneumonia -----	42	7
Tuberculosis -----	181	14
Typhoid fever -----	72	20
Gonorrhea -----	17	7
Syphilis -----	3	3
Chicken pox -----	110	11
Whooping cough -----	68	10
Epidemic cerebro spinal meningitis -----	1	1
Tonsilitis -----	1	1
Erysipelas -----	20	7
Malaria -----	5	3
Scabies -----	1	1
Trichiniasis -----	1	1
Glanders -----	3	1
Trachoma -----	53	1
Impetigo contagiosa -----	1	1
Totals -----	1,577	203

Legal Division.

Citations were served on sixty-four violators of the California Pure Food and Drugs Act, summoning them to appear before the Board at its regular meeting, May 4, 1912.

Opinions were rendered by the attorney for the Board on the following questions: Relation of State institutions with the State Board of Health, Registration of Births, Fees for Vital Statistical Work, Correction of Death Certificates, Rules for Examination of Vital Statistics Records, Stream Pollution Law, Authority to Perform Autopsies, Assuming Control of Typhoid Carriers, Vaccination, Sanitary Districts and Mosquito Control, Milk Ordinances, Tenement House Law, etc.

REPORT OF BUREAU OF VITAL STATISTICS FOR APRIL.

GEORGE D. LESLIE, Statistician.

State Totals and Annual Rates.—The following table shows for California as a whole the birth, death, and marriage totals for the current and preceding months in comparison with those for the corresponding months of last year, as well as the annual rates per 1,000 population represented by the totals for the current and preceding months. The rates are based on an estimated midyear population of 2,579,874 for California in 1912, the estimate having been made by the Census Bureau method with slight modifications.

Birth, Death and Marriage Totals, with Annual Rates per 1,000 Population for Current and Preceding Months for California: April.

Month.	MONTHLY TOTAL.		Annual rate per 1,000 population: 1912.
	1912.	1911.	
April—			
Births -----	3,180	2,799	15.0
Deaths -----	3,038	2,666	14.4
Marriages -----	2,365	1,997	11.2
March—			
Births -----	3,306	2,818	15.1
Deaths -----	3,363	3,001	15.4
Marriages -----	1,816	1,705	8.3

The birth, death and marriage totals for April, as for preceding months, were much greater in 1912 than in 1911. The birth registration has been much greater each month this year than in the corresponding month of last year.

County Totals.—The first table on the following page shows the monthly birth, death, and marriage totals for the principal counties of the State, the list being limited to counties having a population of at least 25,000 according to the Federal Census of 1910. Totals are also shown for San Francisco and the other bay counties (Alameda, Contra Costa, Marin, and San Mateo), as well as for Los Angeles and Orange counties together.

City Totals.—The second table on the following page gives the birth and death totals for the principal freeholders' charter cities, the list including all chartered cities with a census population of at least 15,000 in 1910. Totals are given likewise for San Francisco in comparison with Oakland, Alameda, and Berkeley, the three cities adjoining one another on the east shore of San Francisco Bay, as well as for Los

Angeles in comparison with neighboring chartered cities (Long Beach, Pasadena, Pomona, and Santa Monica).

Birth, Death and Marriage Totals, for Principal Counties: April.

County.	APRIL, 1912.		
	Births.	Deaths.	Marriages.
California -----	3,180	3,038	2,365
Counties of more than 25,000 population (1910):			
Alameda -----	314	304	212
Butte -----	41	35	23
Contra Costa -----	30	24	20
Fresno -----	118	71	83
Humboldt -----	34	30	30
Kern -----	36	41	33
Los Angeles -----	763	782	570
Marin -----	39	23	59
Orange -----	43	42	107
Riverside -----	36	31	26
Sacramento -----	118	76	82
San Bernardino -----	75	79	47
San Diego -----	118	105	91
San Francisco -----	597	554	445
San Joaquin -----	46	103	52
San Mateo -----	55	20	24
Santa Barbara -----	30	24	28
Santa Clara -----	94	106	99
Santa Cruz -----	40	33	16
Solano -----	20	38	12
Sonoma -----	49	59	35
Tulare -----	47	37	20
Selected groups:			
San Francisco and other bay counties -----	1,035	925	760
Los Angeles and Orange counties -----	806	824	677

Birth and Death Totals, for Principal Cities: April.

City.	APRIL, 1912.	
	Births.	Deaths.
Freeholders' charter cities -----	2,023	1,857
Cities of more than 15,000 population (1910):		
Alameda -----	23	26
Berkeley -----	25	33
Fresno -----	48	25
Long Beach -----	24	25
Los Angeles -----	545	517
Oakland -----	218	187
Pasadena -----	47	43
Riverside -----	21	17
Sacramento -----	93	63
San Diego -----	87	73
San Francisco -----	597	554
San Jose -----	36	37
Stockton -----	26	51
Selected groups:		
San Francisco -----	597	554
Oakland, Alameda and Berkeley -----	291	246
Total, Bay cities -----	888	800
Los Angeles -----	545	517
Neighboring cities -----	83	96
Total -----	628	613

Causes of Death.—The following table shows the classification of deaths in California for the current month, in comparison with the preceding month:

Deaths from Certain Principal Causes, with Proportion per 1,000 Total Deaths for Current and Preceding Month, for California: April.

Cause of death.	Deaths: April.	Proportion per 1,000.	
		April.	March.
ALL CAUSES-----	3,038	1,000.0	1,000.0
Typhoid fever-----	25	8.2	7.4
Malarial fever-----	4	1.3	1.8
Smallpox-----	1	0.3	-----
Measles-----	21	6.9	8.6
Scarlet fever-----	3	1.0	1.2
Whooping-cough-----	18	5.9	3.3
Diphtheria and croup-----	15	4.9	6.0
Influenza-----	17	5.6	7.1
Other epidemic diseases-----	12	4.0	6.0
Tuberculosis of lungs-----	383	126.1	122.8
Tuberculosis of other organs-----	76	25.0	24.1
Cancer-----	190	62.5	60.4
Other general diseases-----	157	51.7	52.0
Meningitis-----	39	12.8	8.6
Other diseases of nervous system-----	233	76.7	76.4
Diseases of circulatory system-----	531	174.8	181.4
Pneumonia and broncho-pneumonia-----	259	85.3	94.3
Other diseases of respiratory system-----	74	24.4	28.8
Diarrhea and enteritis, under 2 years-----	38	12.5	19.3
Diarrhea and enteritis, 2 years and over-----	22	7.2	5.9
Other diseases of digestive system-----	166	54.6	54.1
Bright's disease and nephritis-----	187	61.6	60.4
Childbirth-----	33	10.9	7.7
Diseases of early infancy-----	121	39.8	27.1
Suicide-----	74	24.4	19.6
Other violence-----	219	72.1	67.5
All other causes-----	120	39.5	48.2

In April there were 531 deaths, or 17.5 per cent of all, from diseases of the circulatory system, and 4.59, or 15.1 per cent from various forms of tuberculosis. Heart disease thus led tuberculosis greatly.

Other notable causes of death were: Diseases of the respiratory system, 333; violence, 293; diseases of nervous system, 272; diseases of digestive system, 226; cancer, 190; Bright's disease and nephritis, 187, and epidemic diseases, 116.

The deaths from epidemic diseases were as follows: Typhoid fever, 25; measles, 21; whooping-cough, 18; influenza, 17; diphtheria and croup, 15; and all other epidemic diseases, 20.

The deaths from the three leading epidemic diseases reported for the month were distributed by counties as follows:

Typhoid Fever.		Measles.		Whooping-cough.	
Alameda	4	Alameda	1	Butte	1
Amador	1	Butte	2	Fresno	1
Humboldt	1	Fresno	2	Kern	1
Imperial	1	Orange	1	Kings	1
Kings	1	Sacramento	2	Los Angeles	5
Los Angeles	7	San Francisco	10	Monterey	1
Marin	1	Santa Clara	2	Orange	1
Merced	2	Sonoma	1	Riverside	1
Napa	1	Total	21	San Bernardino	1
Orange	1			San Francisco	1
Placer	1			Solano	3
San Benito	1			Tulare	1
San Francisco	2			Total	18
San Joaquin	1				
Total	25				

Geographic Divisions.—The following table presents data for geographic divisions, including the metropolitan area, or San Francisco and the other bay counties (Alameda, Contra Costa, Marin, and San Mateo), in comparison with the rural counties of Northern and Central California:

Deaths from Main Classes of Diseases, for Geographic Divisions: April.

Geographic division.	DEATHS: APRIL.										
	All causes	Epidemic diseases	Tuberculosis (all forms)	Cancer	Diseases of nervous system	Diseases of circulatory system	Diseases of respiratory system	Diseases of digestive system	Bright's disease and nephritis	Violence	All other causes
THE STATE	3,038	116	459	190	272	531	333	226	187	293	431
Northern California	320	12	36	21	34	62	38	19	18	30	50
Coast counties	155	6	19	7	19	37	16	9	8	12	22
Interior counties	165	6	17	14	15	25	22	10	10	18	28
Central California	1,608	52	215	108	135	300	186	120	93	169	230
San Francisco	554	17	76	37	43	97	65	54	28	42	95
Other bay counties	371	9	57	33	31	65	43	24	20	42	47
Coast counties	183	4	18	10	20	33	24	18	16	14	26
Interior counties	500	22	64	28	41	105	54	24	29	71	62
Southern California	1,110	52	208	61	103	169	109	87	76	94	151
Los Angeles	782	36	155	47	63	122	74	57	60	58	110
Other counties	328	16	53	14	40	47	35	30	16	36	41
Northern and Central California	1,928	64	251	129	169	362	224	139	111	199	280
Metropolitan area	925	26	133	70	74	162	108	78	48	84	142
Rural counties	1,003	38	118	59	95	200	116	61	63	115	138

Sex and Age Periods.—The proportion of the sexes among the 3,038 decedents in April was: Male, 1,827, or 60.1 per cent, and female, 1,211, or 39.9 per cent.

The following table shows the age distribution by numbers and per cents, of deaths classified by sex:

Deaths Classified by Sex and Age Periods, with Per Cents by Age Periods, for California: April.

Age period.	Deaths.			Per cent.		
	Total.	Male.	Female.	Total.	Male.	Female.
ALL AGES-----	3,038	1,827	1,211	100.0	100.0	100.0
Under 1 year-----	304	161	143	10.0	8.8	11.8
1 to 4 years-----	145	73	72	4.8	4.0	6.0
5 to 14 years-----	77	41	36	2.5	2.2	3.0
15 to 24 years-----	187	90	97	6.2	4.9	8.0
25 to 34 years-----	317	203	114	10.4	11.1	9.4
35 to 44 years-----	366	236	130	12.1	12.9	10.7
45 to 54 years-----	358	233	125	11.8	12.8	10.3
55 to 64 years-----	390	252	138	12.8	13.8	11.4
65 years and over-----	894	538	356	29.4	29.5	29.4

This table shows that relatively more females than males died at under 1 year, 1 to 4 years, 5 to 14 years, and 15 to 24 years, or at each age period under 25 years of age.

Occupations.—The table below gives, for deaths 15 years and over, the number of men and women for whom some occupation was reported in contrast with those for whom no gainful occupation was shown:

Deaths, Fifteen Years and Over, Classified by Sex and Occupation, with Per Cents by Sex, for California: April.

	Deaths.			Per cent male.	Per cent female.
	Total.	Male.	Female.		
15 YEARS AND OVER-----	2,512	1,552	960	61.8	38.2
Occupation reported -----	1,432	1,345	87	93.9	6.1
No gainful occupation-----	1,080	207	873	19.2	80.8

Of the 1,432 decedents for whom occupations were reported the males numbered 1,345, or 93.9 per cent, and the females only 87, or 6.1 per cent.

The following table shows the distribution of male decedents 15 years and over, engaged in the main kinds of occupation:

Deaths of Males, Fifteen Years and Over, Engaged in Gainful Occupations, Classified by Kinds of Occupation, with Per Cents, for California: April.

Kind of occupation.	Males 15 years and over.	
	Deaths.	Per cent.
ALL OCCUPATIONS-----	1,345	100.0
Professional -----	73	5.4
Clerical and official-----	95	7.1
Mercantile and trading -----	105	7.8
Public entertaining -----	22	1.6
Personal service, police and military-----	32	2.4
Laboring and servant-----	288	21.4
Manufacturing and mechanical industry-----	286	21.3
Agriculture, transportation and other outdoor-----	430	32.0
All other occupations-----	14	1.0

Of the 1,345 male decedents for whom occupations were reported 430, or 32.0 per cent, were engaged in agriculture, transportation, and other outdoor pursuits; 286, or 21.3 per cent, in manufacturing and mechanical industry; 288, or 21.4 per cent, in laboring and servant work; and altogether 341, or 25.3 per cent, in professional, clerical and official, mercantile and trading, and all other occupations.

REPORT OF BUREAU OF THE HYGIENIC LABORATORY FOR MAY.

WILBUR A. SAWYER, M.D., Director.

Pasteur Institute.

On May 18, 1912, the State Board of Health took final action establishing a Pasteur Institute as a department of the State Hygienic Laboratory. At the request of the Board a representative of the United States Public Health and Marine Hospital Service inspected the laboratory on June 3, 1912. The Pasteur Institute was found to be entirely satisfactory, and from the date of inspection all the virus sent out has been manufactured at the laboratory.

No change has been made in the method of distributing or administering antirabic virus or in the arrangements for making diagnostic examinations for rabies. Patients are accepted for treatment only when they are unable to pay the necessary expense of procuring treatment from private physicians. The decision regarding the financial ability of persons to pay for treatment lies chiefly with the local health officer, to whom applications for treatment should be made. All the virus issued by the State is administered by officers of the State Board of Health at laboratories in Berkeley, Sacramento, San Francisco, Fresno, and Los Angeles.

The Pasteur Institute of the California State Board of Health is, as far as the Director knows, the first to be established west of Austin, Texas. The increase of rabies in California made it imperative that there should be a place of manufacture close at hand. Production of the virus within the State permits shortening the time interval between manufacture and administration and also diminished the risk of delay in transit or of shortage in the supply.

In the regular tabulated report will be found the stations at which antirabic treatment is administered and also the results of the diagnostic examinations for rabies.

Summary of Examinations Made in the California State Hygienic Laboratory During the Month of May, 1912.

Condition suspected.	Positive.	Negative.	Inconclusive.	Total.
Main Laboratory at Berkeley:				
Anthrax -----		1		1
Diphtheria -----	15	40		55
Gonococcus infection -----	4	1		5
Malaria -----	2	4		6
Rabies -----	29	3	1	33
Tuberculosis -----	16	28		44
Typhoid -----	4	13		17
Water -----	1	3	2	6
Hookworm -----		1		1
Miscellaneous -----		4		4
	71	98	3	172
San Joaquin Valley Branch at Fresno:				
Diphtheria -----			1	1
Tuberculosis -----	2			2
	2		1	3
Southern Branch at Los Angeles:				
Diphtheria -----	3	4		7
Typhoid -----		2		2
	3	6		9
Northern Branch at Sacramento:				
Diphtheria -----		2		2
Tuberculosis -----	1	8		9
Typhoid -----		2		2
Malaria -----		1		1
	1	13		14
Total number of examinations -----				198

Pasteur Treatment for the Prevention of Rabies by the State Hygienic Laboratory During the Month of May, 1912.

	Treatment commenced.	Treatment completed.
Main Laboratory at Berkeley -----	8	0
Northern Branch at Sacramento -----	1	2
San Joaquin Valley Branch at Fresno -----	0	2
Southern Branch at Los Angeles -----	0	0
Laboratory of Sacramento Board of Health, by deputized bacteriologist -----	0	0
Laboratory of San Francisco Board of Health, by deputized bacteriologist -----	22	21
Laboratory of Los Angeles Board of Health, by deputized bacteriologist -----	0	0
Laboratory of Letterman General Hospital, Presidio, by deputized bacteriologist -----	2	0
	33	25

Bureau of the Hygienic Laboratory.

Participation in Instruction in Public Health During May, 1912.

Main Laboratory at Berkeley:	
Bacteriological instruction outfits sent out -----	0
Bacteriological instruction outfits in use -----	17
Exhibits loaned from hygienic museum sent out -----	0
Exhibits loaned from hygienic museum in use -----	2
Number of models or other pieces of apparatus in above exhibits -----	9
Lectures or talks by the Director -----	0

Division of Epidemiological Investigations.

Main Laboratory at Berkeley:

- Special investigations by the Director..... 4
 Investigation of two cases of trichinosis.
 Completion of the investigation of a case of ambulatory typhoid.
 Investigation of a case of rabies in a dog which ran twenty-five miles distributing the disease.
 Investigation of the history of a rabid dog brought from Fresno to Berkeley during the incubation period, with the result that five people were bitten in Berkeley and Oakland.

REPORT OF BUREAU OF FOOD AND DRUGS FOR MAY.

The following Food Inspection Decisions have been received at the Laboratory and it would appear that they are of such vital interest to both manufacturer and consumer that they are here reprinted:

Food Inspection Decision 139.

USE OF THE TERM "SWEET OIL."

From time to time this department has received inquiries asking whether or not it is permissible, under the Food and Drug Act, to label cottonseed oil as "sweet oil." Investigations have shown that some samples marked "sweet oil" consist of cottonseed oil or a mixture of olive oil and cottonseed oil. A careful consideration of the subject leads to the conclusion that the only oil to which the term "sweet oil" may be correctly applied is olive oil.

It is held, therefore, that any oil other than olive oil is misbranded when sold under the name "sweet oil." It is not correct, for example, to label cottonseed oil as "sweet oil" and then elsewhere on the label to describe correctly the true character of the oil.

Food Inspection Decision 140.

LABELING OF VINEGARS.

The Board of Food and Drug Inspection has given this question much consideration. A public hearing was given, a series of questions submitted to the various State food commissioners, interested manufacturers, wholesalers, retailers, and consumers, and a study of the various State laws and regulations was made, believing that these represent the general understanding of the terms by the people of those States. From the information thus obtained the Board has reached the conclusion that the definitions given in Circular No. 19, Office of the Secretary, are in accordance with the facts. These are as follows:

1. *Vinegar, cider vinegar, apple vinegar*, is the product made from the alcoholic and subsequent acetous fermentations of the expressed juice of apples.
2. *Wine vinegar, grape vinegar*, is the product made by the alcoholic and subsequent acetous fermentations of the juice of grapes.
3. *Malt vinegar* is the product made by the alcoholic and subsequent acetous fermentations, without distillation, of an infusion of barley malt or cereals whose starch has been converted by malt.
4. *Sugar vinegar* is the product made by the alcoholic and subsequent acetous fermentations of solutions of sugar, sirup, molasses, or refiner's sirup.
5. *Glucose vinegar* is the product made by the alcoholic and subsequent acetous fermentations of solutions of starch sugar or glucose.
6. *Spirit vinegar, distilled vinegar, grain vinegar*, is the product made by the acetous fermentation of dilute distilled alcohol.

Several questions regarding these definitions have been raised and after investigation the Board has reached the following conclusions:

Meaning of the term "vinegar."—While the term "vinegar" in its etymological significance suggests only sour wine, it has come to have a broader significance in English-speaking countries. In the United States it has lost entirely its original meaning and when used without a qualifying word designates only the product secured by the alcoholic and subsequent acetous fermentation of apple juice.

"Second pressings."—It is held that the number of pressings used in preparing the juice is immaterial so long as the pomace is fresh and not decomposed. The practice

of allowing the pomace from the presses to stand in piles or in vats for a number of days, during which time it becomes heated and decomposed, and then pressing, securing what is ordinarily called "second pressing," in the opinion of the Board produces a product which consists in whole or in part of a filthy and decomposed material and is therefore adulterated.

Vinegar from dried-apple products.—The product made from dried-apple skins, cores, and chops, by the process of soaking, with subsequent alcoholic and acetous fermentations of the solution thus obtained, is not entitled to be called vinegar without further designation, but must be plainly marked to show the material from which it is produced. The dried stock from which this product is prepared must be clean and made from sound material.

Addition of water.—When natural vinegars made from cider, wine, or the juice of other fruits are diluted with water, the label must plainly indicate this fact; as, for example, "diluted to — per cent acid strength." When water is added to pomace in the process of manufacture, the fact that the product is diluted must be plainly shown on the label in a similar manner. Dilution of vinegar naturally reduces, not only the acid strength, but the amount of other ingredients in proportion to the dilution, so that reduced vinegars will not comply with the analytical constants for undiluted products; but the relations existing between these various ingredients will remain the same. Diluted vinegars must have an acid strength of at least 4 grams acetic acid per 100 cubic centimeters.

Mixtures of vinegars.—As different kinds of vinegar differ in source, flavor, and chemical composition, mixtures thereof are compounds within the meaning of the Food and Drugs Act, and if they contain no added poisonous or other added deleterious ingredients, will not be held to be misbranded if plainly labeled with the word "compound," together with the names and proportions of the various ingredients.

Addition of boiled cider and coloring matter.—The Food and Drugs Act provides that a product shall be deemed to be adulterated if it be mixed, colored, powdered, coated, or stained in a manner whereby damage or inferiority is concealed; and, in the opinion of the Board, the addition of coloring matters, boiled cider, etc., to vinegar, wine vinegar, and the other types of vinegar, or mixtures thereof, is for the purpose of concealing damage or inferiority or producing an imitation product. In the first instance, the use of such products is an adulteration and therefore prohibited. Products artificially colored or flavored with harmless ingredients in imitation of some particular kind of vinegar will not be held to be misbranded if plainly labeled "Imitation vinegar" in accordance with the provisions of the law.

Mixture of distilled and sugar vinegars.—The product prepared by submitting to acetous fermentation a mixture of dilute alcohol (obtained, for example, from molasses by alcoholic fermentation and subsequent distillation) and dilute molasses, which has undergone alcoholic fermentation, is not "molasses vinegar" but a compound of distilled vinegar and molasses vinegar; such mixtures, however, must contain a substantial amount of molasses vinegar and not a small amount for the purpose of coloring the distilled vinegar. The molasses used must be fit for food purposes and free from any added deleterious substances.

Acetic acid diluted.—The product made by diluting acetic acid is not vinegar and when intended for food purposes must be free from harmful impurities and sold under its own name.

Product obtained by distilling wood.—The impure product made by the destructive distillation of wood, known as "pyroligneous acid," is not vinegar nor suitable for food purposes.

Acid strength.—All of the products described above should contain not less than four (4) grams of acetic acid per one hundred (100) cubic centimeters.

REPORT OF BUREAU OF PUBLICATIONS AND HEALTH INFORMATION.

GUY P. JONES, Acting Director.

This Bureau has been in receipt of many inquiries from teachers and school departments intending to add courses in public health instruction, sanitation and hygiene, to the regular curriculum upon the opening of the fall term. Not only have high schools applied for information regarding the installation of such work, but grammar and rural schools as well. There are many publications of the Board that are useful in this instruction, such as those bearing upon the extermination of flies, malaria, tuberculosis, smallpox and vaccination, etc. Copies of these bulletins and circulars are sent in quantity, free of all cost, to schools making such application.

In addition, this Bureau is prepared to make suggestions regarding references to texts needed for such work, and will gladly outline courses of instruction upon sanitation and disease prevention. Bibliographies of this sort are in print, and copies will be sent to all who make application for them.

Bacteriological instruction outfits are loaned to schools, application for which should be made to Dr. W. A. Sawyer, Director of the State Hygienic Laboratory, Berkeley, California. These outfits contain plates showing killed bacteria from the rim of a public drinking cup, from the tracks of an ordinary house fly, etc. Others show the effect of sunlight upon germs, the difference in number of bacteria found in dirty and clean milk, the few germs found in still air and the great numbers stirred up in a room during dry sweeping, etc. There are ten plates in the outfit and all will be found useful in demonstrating disease prevention. These outfits are loaned for temporary use only and must be promptly returned to the laboratory, in order that other schools may receive benefit likewise.

This Bureau also has a considerable supply of bulletins dealing with poliomyelitis, which are for free distribution to any citizen of the State. This disease is one concerning which there is little actual knowledge, but the bulletin contains articles designed to be of use to the average citizen who may desire information upon the subject.

LIST OF COUNTY HEALTH OFFICERS.

County.	Health officer.	Address.
Alameda	Dr. C. L. McKown	Niles
Alpine*	County Recorder Frank Smith	Markleeville
Amador	Dr. E. E. Endicott	Jackson
Butte	Dr. L. Q. Thompson	Gridley
Calaveras	Dr. Irwin B. March	Angels Camp
Colusa	Dr. C. A. Poage	Colusa
Contra Costa	Dr. W. S. George	Antioch
Del Norte	Dr. E. M. Fine	Crescent City
El Dorado	Dr. L. M. Leisenring	Placerville
Fresno	Dr. W. T. Burks	Fresno
Glenn	Dr. J. A. Randolph	Willows
Humboldt	Dr. E. H. Bryant	Eureka
Imperial	Dr. Virgil McCoombs	El Centro
Inyo	Dr. I. J. Woodin	Independence
Kern	Dr. G. M. Bumgarner	Bakersfield
Kings	Dr. Ralph Motherol	Hanford
Lake	Dr. W. E. Upton	Kelseyville
Lassen	Dr. W. E. Dozier	Susanville
Los Angeles	Dr. E. O. Sawyer	Los Angeles
Madera	Dr. Mary R. Butin	Madera
Marin	Dr. J. H. Kuser	Novato
Mariposa	Dr. F. L. Wright	Mariposa
Mendocino	Dr. J. Liftchild	Ukiah
Merced	Dr. C. H. Castle	Merced
Modoc	Dr. John Stile	Alturas
Mono*	County Recorder Geo. Delury	Bridgeport
Monterey	Dr. Garth Parker	Salinas
Napa	Dr. E. Z. Hennessey	Napa
Nevada	Dr. Carl P. Jones	Grass Valley
Orange	Dr. John Wehrly	Santa Ana
Placer	Dr. O. L. Barton	Loomis
Plumas	Dr. F. D. Walsh	Quincy
Riverside	Dr. George E. Tucker	Riverside
Sacramento	Dr. Hugh Beattie	Elk Grove
San Benito	Dr. J. M. O'Donnell	Hollister
San Bernardino	Dr. Philip M. Savage	San Bernardino
San Diego	Dr. Nathan Hunt	San Diego
San Francisco	Dr. R. G. Brodrick	San Francisco
San Joaquin	Dr. R. B. Knight	Stockton
San Luis Obispo	Dr. H. M. Cox	San Luis Obispo
San Mateo	Dr. W. G. Beattie	Colma
Santa Barbara	Dr. J. C. Bainbridge	Santa Barbara
Santa Clara	Dr. William Simpson	San Jose
Santa Cruz	Dr. W. R. Congdon	Santa Cruz
Shasta	Dr. F. Stabel	Redding
Sierra	Dr. R. B. Day	Downieville
Siskiyou	Dr. F. J. McNulty	Yreka
Solano	Dr. S. G. Bransford	Suisun
Sonoma	Dr. P. A. Meneray	Santa Rosa
Stanislaus	Dr. F. R. De Lappe	Modesto
Sutter	Dr. J. McFadyen	Yuba City
Tehama	Dr. J. S. Cameron	Red Bluff
Trinity	Dr. D. B. Fields	Weaverville
Tulare	Dr. W. A. Preston	Visalia
Tuolumne	Dr. Wm. Lyman Hood	Sonora
Ventura	Dr. A. A. Maulhardt	Oxnard
Yolo	Dr. W. J. Blevins	Woodland
Yuba	Dr. J. H. Barr	Marysville

LIST OF CITY HEALTH OFFICERS.

City.	Health officer.	City.	Health officer.
Alameda	Dr. A. Hieronymus	Calexico	Dr. Wm. F. Smith
Albany	Dr. Robt. Hector	Chico	G. H. Taylor
Alhambra	Dr. F. E. Corey	Chino	Dr. John W. Callnon
Alturas	Dr. John Stile	Claremont	
Alviso		Cloverdale	F. P. Conner
Anaheim	Dr. J. L. Beebe	Coalinga	Dr. H. S. Warren
Antioch	Dr. W. S. George	Colfax	
Arcadia		Colton	Dr. L. A. J. La Motte
Arcata	Dr. G. W. McKinnon	Colusa	Dr. C. A. Poage
Arroyo Grande		Compton	J. W. Stone
Auburn	A. I. Waldo	Concord	Dr. F. F. Neff
Azusa	Dr. L. W. Atkinson	Coram	Geo. H. Thomas
Bakersfield	S. D. Mullins	Corning	Dr. W. F. Maggard
Belvedere	Dr. Florence Scott	Corona	Dr. W. H. Chapman
Benicia	Dr. W. L. McFarland	Coronado	Dr. Raffaele Lorini
Berkeley	Dr. J. J. Benton	Cottonwood	Dr. A. B. Gilliland
Biggs	Dr. B. Caldwell	Covina	
Bishop	Dr. J. W. Shute	Crescent City	
Blue Lake	Dr. G. N. Wood	Daly City	
Brawley	Dr. L. L. Lindsey	Davis	Dr. W. E. Bates
Burbank		Delano	Dr. H. Hildreth
Burlingame		Dinuba	Dr. Wm. Whittington
Calistoga		Dorris	Dr. A. A. Atkinson

LIST OF CITY HEALTH OFFICERS—Continued.

City.	Health officer.	City.	Health officer.
Dixon	W. C. Rhem	Paso Robles	B. B. Pierce
Dunsmuir	Dr. W. B. Mason	Perris	A. F. Hardy
Eagle Rock	Dr. C. H. Phinney	Petaluma	Dr. J. M. Proctor
Elsinore	Dr. George D. Keeler	Pinole	J. Chattleton
Emeryville	Dr. A. T. Drennan	Pittsburg	Dr. F. S. Gregory
Escondido	Dr. David Crise	Placerville	P. J. Hall
Etna Mills	Dr. W. H. Haines	Pleasanton	Dr. S. J. Wells
Eureka	Dr. L. A. Wing	Pomona	Dr. T. J. Wilson
Exeter	Dr. A. D. McLean	Porterville	Dr. O. C. Higgins
Fairfield	Dr. S. G. Bransford	Piedmont	Geo. T. Burtchael
Ferndale	Dr. C. A. Phelan	Point Arena	
Fort Bragg	Dr. L. C. Gregory	Potter Valley	
Fort Jones	Thos. Bransom	Randsburg	E. B. McGinnes
Fortuna	Dr. Geo. S. Loveren	Red Bluff	Dr. F. J. Bailey
Fowler	Dr. W. T. Crawford	Redding	L. D. Poole
Fresno	Dr. Geo. H. Aiken	Redlands	Dr. Chas. E. Ide
Fullerton	Dr. F. J. Gobar	Redondo Beach	Dr. D. R. Hancock
Gilroy	Dr. John A. Clark	Redwood City	Dr. J. L. Ross
Glendale	Dr. R. E. Chase	Richmond	Dr. Chas. R. Blake
Grass Valley	Paul E. Sears	Rio Vista	Dr. A. J. McKinnon
Gridley	Dr. L. L. Thompson	Riverside	Dr. Thos. R. Griffith
Hanford	Dr. R. W. Musgrave	Rocklin	H. D. Flesche
Hayward	Dr. G. E. Reynolds	Roseville	Dr. R. H. Ashby
Healdsburg	Dr. J. W. Seawell	Ross	
Hemet	Dr. A. B. Eadie	Sacramento	Dr. Wm. K. Lindsay
Hermosa Beach	G. A. Cleaveland	Saint Helena	S. H. Pettit
Hercules	Dr. M. L. Fernandez	Salinas	S. A. McCollum
Hillsborough		San Anselmo	Dr. Chipman
Hollister	Dr. R. G. Curtis	San Bernardino	Dr. C. V. McConnico
Hollywood	E. O. Palmer	San Diego	Dr. F. H. Mead
Huntington Beach	Dr. G. A. Shank	San Francisco	Dr. R. G. Brodrick
Huntington Park	Dr. W. Thompson	Sanger	Dr. T. F. Madden
Imperial	Dr. C. E. Standlee	San Jose	Dr. M. F. Hopkins
Inglewood	Dr. H. A. Putnam	San Jacinto	Thos. Lloyd
Jackson	F. V. Sanguinetti	San Juan	W. R. Moore
Kennett	Dr. J. P. Sandholdt	San Luis Obispo	Dr. P. L. Rookledge
Kernville		San Rafael	Dr. W. F. Jones
King City		San Mateo	Dr. S. G. Goodspeed
Kingsburg		San Leandro	P. C. Du Bois
Lakeport	Jabez Banks	Santa Ana	Dr. J. I. Clark
Larkspur		Santa Barbara	Dr. D. A. Conrad
Lincoln	F. R. Elder	Santa Cruz	Dr. H. E. Piper
Lindsay	Dr. W. W. Tourtillot	Santa Clara	Dr. J. F. Beattie
Livermore	Dr. H. G. McGill	Santa Monica	Dr. W. H. Parker
Lodi	Dr. F. W. Colman	Santa Paula	Dr. B. E. Murrill
Long Beach	Dr. W. H. Newman	Santa Rosa	Dr. Jackson Temple
Lompoc		Santa Maria	Dr. O. P. Paulding
Lordsburg	Dr. J. E. Hubble	Sausalito	Dr. A. H. Mays
Los Angeles	Dr. L. M. Powers	Sawtelle	Dr. A. B. Hromadka
Los Banos	Dr. J. L. McClelland	Selma	Dr. F. H. Williams
Los Gatos	Dr. C. K. Small	Sierra Madre	Dr. R. H. Mackerras
Loyalton	Dr. G. L. Coates	Sebastopol	Dr. J. J. Keating
Madera		Sisson	
Maricopa	Dr. H. N. Taylor	South Pasadena	Dr. C. A. Whiting
Martinez	Dr. E. E. Brown	South San Francisco	Dr. H. G. Plymire
Marysville	Wm. Meek	Stockton	Dr. R. T. McGurk
Mayfield	Dr. F. M. Seibert	Susanville	Dr. E. S. Drucks
McCloud	Dr. R. T. Legge	Suisun	
McKittrick	G. M. Chitwood	Stanton	
Merced	Dr. C. H. Castle	Sonoma	
Mill Valley	Capt. M. Staples	Taft	E. G. Wood
Modesto	Dr. J. J. Knowlton	Tehachapi	L. M. Denison
Montague		Tracy	Dr. J. G. Murrell
Mojave	A. Smith	Tehama	
Monrovia	Dr. C. D. Gaylord	Tropico	
Monterey	Edward Allen	Tulare	Dr. J. B. Rosson
Morgan Hill	Dr. D. W. Watt	Turlock	Dr. E. L. Clough
Mountain View	Dr. A. H. McFarlane	Ukiah	Dr. J. Liftchild
Napa	J. D. Treadway	Upland	W. C. Redman
National City	Dr. T. F. Johnson	Vacaville	Dr. A. P. Finan
Nevada City	Hugh Murchie	Vallejo	Dr. E. A. Peterson
Newman	Dr. H. V. Armistead	Venice	Dr. W. M. Kendall
Newport Beach		Ventura	J. H. Hardey
Oakdale	Elmer E. Endicott	Visalia	Dr. A. W. Preston
Oakland	Dr. E. N. Ewer	Watsonville	Dr. F. H. Koepke
Ocean Side	Dr. R. S. Reid	Watts	Dr. E. J. Richie
Ocean Park	Dr. W. M. Kendall	Wheatland	Dr. A. W. Foshay
Ontario	Dr. C. S. Orr	Whittier	Dr. W. H. Stokes
Orange	Dr. F. L. Champline	Willits	Dr. W. L. Blodgett
Orland	Dr. S. Goldman	Willows	Thos. Kinkade
Oroville	Dr. W. F. Gates	Winters	Dr. J. H. Haile
Oxnard	Dr. Ralph W. Avery	Woodland	Peter Scott
Pacific Grove	Dr. W. V. Grimes	Yreka	W. D. Doggett
Palo Alto	Hubert O. Jenkins	Yuba City	
Pasadena	Dr. Stanley P. Black		

The California State Board of Health Bulletin will be sent free to any citizen of the State on request.

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